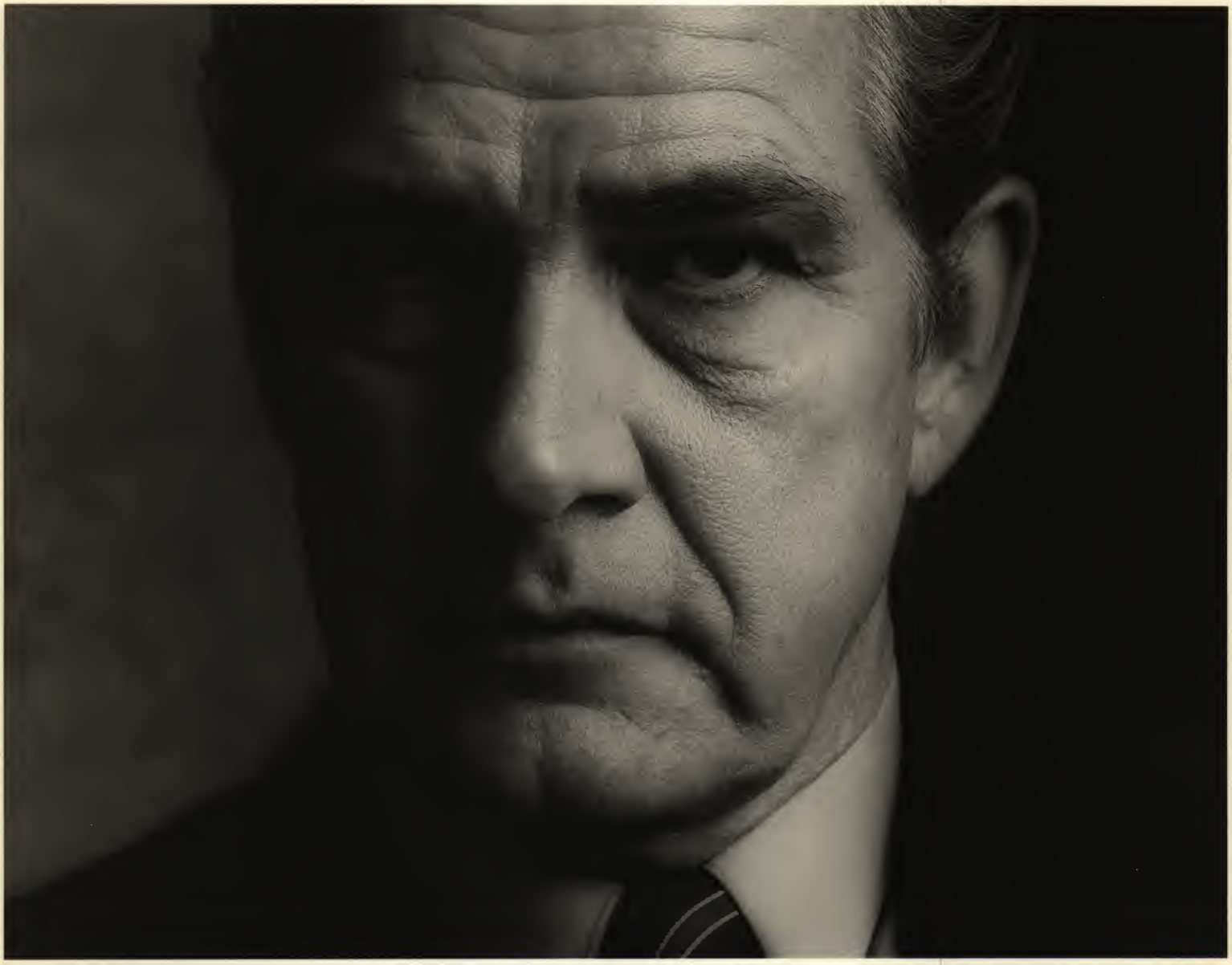
"I've heard a dozen opinions
on how to network my computers.



So tell me something I don't know.
Like why."

It's time for a mee

In the process of working together, people need to share information, consolidate it for group projects, circulate it for review, and then communicate the results.

We call these people a workgroup. A workgroup could be a department within a company—or the entire company. Typically, it consists of three to ten people. Exchanging messages by leaving Post-it notes or by playing telephone tag. Working on the same budgets, plans, and presentations. Attending the same meetings.

People spending half their time, by some estimates, just trying to communicate.

To that consuming problem, Apple brings a timely solution.

One we call Apple® Desktop Communications.

Apple Desktop Communications lets people use Macintosh™ personal computers to share information and documents electronically.

So they can accomplish more—together.

ting of the minds.

Apple Desktop Communications offers solutions to the five most common communications problems facing business today:

First, by linking people with one another electronically, it allows them to work together—without leaving their desks.

Second, it provides a common data base, to ensure that everyone in your business has access to the most recent information. So they can manage the business more effectively.

Third, it gives people a simple way to access the ever-increasing volume of data available from information services.

Fourth, it lets people using different computers and different operating systems—such as Macintosh and MS-DOS—communicate.

And fifth, it makes information stored in the company mainframe and other host systems readily available to everyone.

Now, we'd like to describe how Apple Desktop Communications can get people working better today.

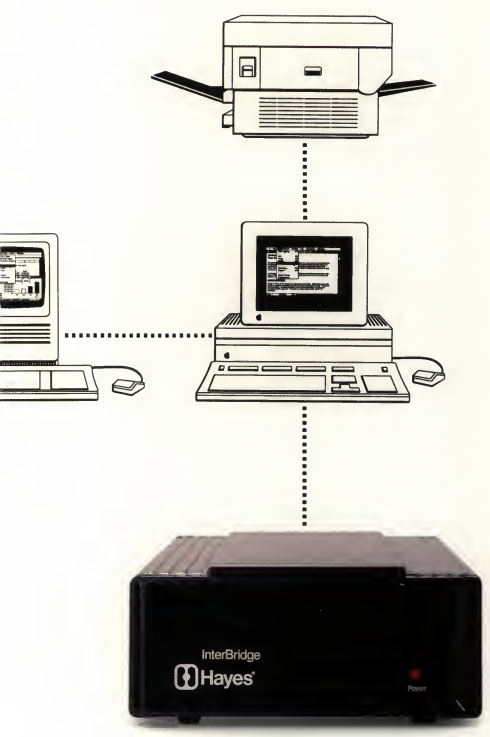
Through easier access to technology. And to each other.

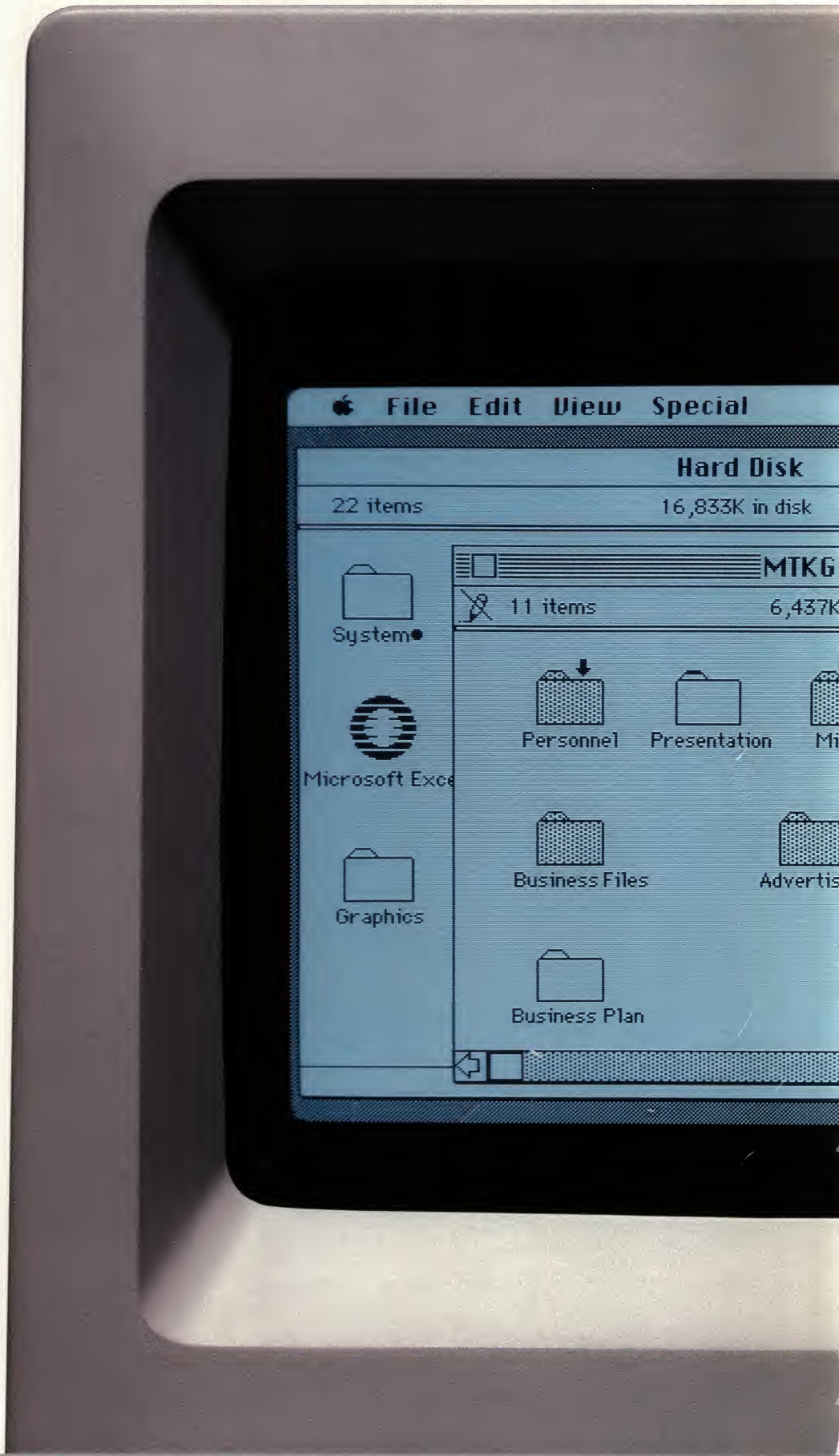
As the simplicity of

LaserWriter® printer, freeing your Macintosh for use on other tasks while you print.

With the right combination of hardware and software, the AppleTalk architecture also allows MS-DOS computers to become card-carrying members of an AppleTalk network. And AppleTalk supports multiuser database products such as Helix from Odesta and Omnis 3 from Blyth Software.

This flexibility offers you an entirely new way of getting things done. So to help you get started, we offer the Network Administrators Course. This course can train anyone who understands the basics of Macintosh to set up the network. And as new products become available, we'll help keep your network up-to-date.

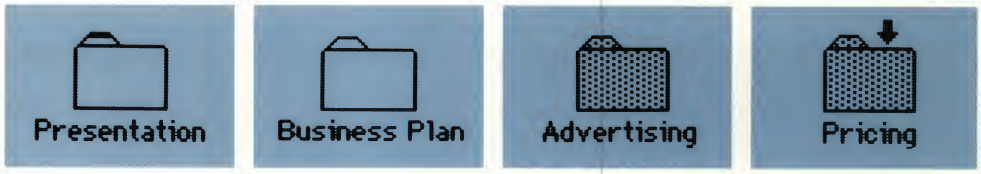




AppleShare™ is a revolutionary system for sharing information within the workgroup. The system consists of file-server software, a Macintosh computer, and virtually any hard disk. With AppleShare, everyone's Macintosh can be linked to a large "electronic file cabinet," in which people can store documents in different kinds of folders.

Folders can be designed to hold private documents. (Only the "owner" of such folders knows their contents, and can read or make changes to documents stored there.)

Folders can also be configured as common storage areas for documents that need to be shared. A folder can even be designated as a "drop box" to receive information from different users. (Once information is filed in this type of folder, it can only be seen or changed by the owner of the drop box.)



On AppleShare, icons indicate the kind of access privileges allowed. Each folder has a tab to indicate ownership. A black tab means you own the folder; a white tab means it belongs to someone else on the network. If the folder is gray, it means you don't have access privileges. A folder with an arrow at the top is a "drop box."

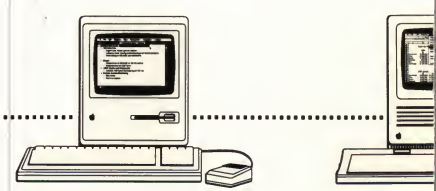
These are just a few of the types of folders made possible through AppleShare's access control—the feature that allows a folder's owner to decide who can access the folder and what kind of access will be allowed.

AppleShare uses the icons characteristic of Macintosh software. Folders look like folders. Click on the AppleShare icon, and you can see all the folders stored in your electronic file cabinet. Your private folders stay private. But other people's shared folders are available to you. And when changes are made to a folder, the updated information appears on everyone's Macintosh.

However, despite its apparent simplicity, AppleShare is an extremely useful system for sharing information. Because it uses the AppleTalk® network architecture, it supports products such as InBox from Think Technologies for electronic mail. With InBox, you can send memos to individuals or to groups of people and receive electronic confirmation that your memos have been read.

You can also use the Apple LaserShare™ print spooler. LaserShare quickly routes documents to the

An AppleShare system can start with a Macintosh Plus or Macintosh SE with a hard disk as the workgroup server. As your needs expand, you can preserve your investment in existing hardware. Simply switch to a Macintosh II for the server and use the original Macintosh server as a personal computer.



An AppleShare file server can support up to 25 users. The AppleTalk network can also be expanded through such products as the Hayes InterBridge or FastPath from Kinetics. Add a LaserShare print spooler to manage print functions and allow many users to take advantage of the Apple LaserWriter printer without long delays.

Share and

PRESENTATIONS
DISTRIBUTION
INTERNATIONAL MARKETING
1986
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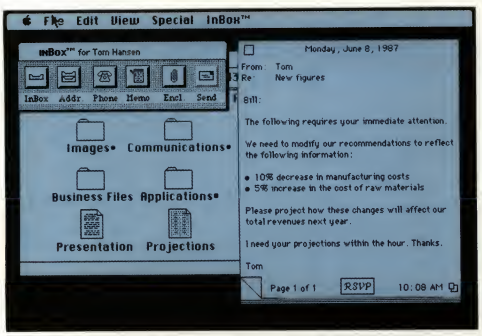
INTERNATIONAL MARKETING
1985

share unalike.

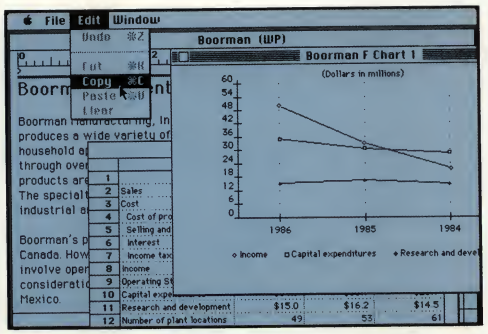


A message appears on Bill's screen telling him that he has a new memo from Tom. InBox also allows documents to be electronically paper-clipped to a memo and sent. Through its RSVP function, InBox will let Tom know when Bill reads his memo. So Tom can be sure that Bill has gotten the message.

write the presentation and Bill to work up the numbers. The Presentation folder contains all the information they need to begin their respective tasks.

10:08 A.M.

You've just learned of changes in the costs of manufacturing and raw materials. That information needs to get to Bill so he can update his section. Rather than interrupt him as he's working, you send him an InBox message to notify him of the new data for his projections. And for your own peace of mind, you invoke the RSVP feature of InBox, so you'll know that Bill got the message.



Bill, Diane, and Tom worked together on the presentation – without leaving their desks – thanks to AppleShare. And ultimately ended up not only with more than Tom asked for, but also much more than he expected.

10:22 A.M.

Things are shaping up nicely. Bill has completed his analysis and has placed a new spreadsheet in the Presentation folder. There, Diane can access it and integrate Bill's numbers into the written presentation.

10:36 A.M.

You've gotten more than you asked for. Line charts, estimates of the impact of alternative manufacturing methods. All have been placed in the same shared folder. Where you can access them and make any changes you deem necessary. Like making the line chart bigger. And reorganizing the presentation to place greater emphasis on the results of last year's marketing survey.

10:55 A.M.

You locate the spreadsheet analyzing the effect of a price increase on sales. Finance needs these numbers to work up its part of the presentation. You copy the spreadsheet and deposit it in Finance's AppleShare drop box, which is called "Pricing."

11:15 A.M.

That's it. The bigger chart is in. Last year's market survey is in a separate section on Page 1. You're satisfied with the final revisions and walk over to the LaserWriter printer to pick up the results.

11:30 A.M.

You send an InBox message to Bill and Diane and tell them to meet you outside the main conference room at 12:50. It's important. Then you head out to pick up theater tickets and dinner reservations: two sets of two.

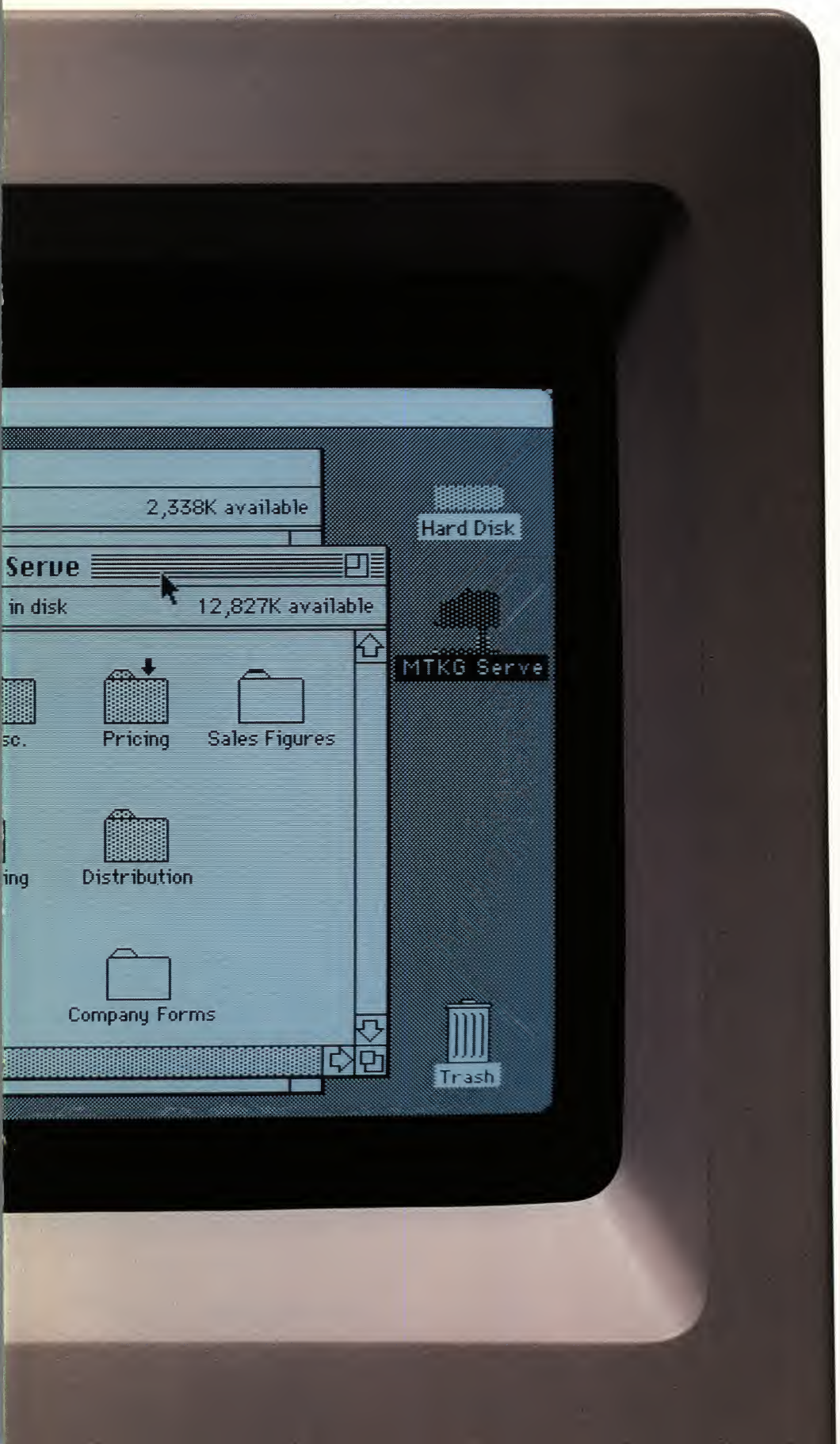
They deserve it.

1:00 P.M.

Showtime.

As part of an AppleShare workgroup, Bill, Diane, and Tom can share information in a timely fashion. And, when complemented by an electronic-mail product like InBox, the lines of communication become even clearer.

AppleShare unfolds.



A concrete example.

You're working for an international manufacturer of construction products.

8:30 A.M.

It's Monday. As the manager of the marketing department, Tom (that's you) needs to determine revenue forecasts before the Boorman presentation today at 1:00 P.M. You'll have to work quickly. Because Finance needs your input on pricing before 11:00 A.M. in order to prepare part of the presentation in time.

Easy enough.

You call a quick staff meeting with Bill and Diane to let them know that you're expecting their help in pulling the presentation together in time.

9:10 A.M.

In the Presentation folder you've created on the AppleShare server, you place an outline of the information you'll need for the big presentation, a list of assignments, and a spreadsheet with assumptions for Bill and Diane to work from. You've asked Diane to

Meet on differen

Because Macintosh computers can do more than exchange information with MS-DOS computers and mainframes. They can obtain information from those other computers more easily. Analyze it using more powerful software. And share it with the workgroup more readily.

So you don't just continue to enjoy a good return on your computer investment. You also get dividends in increased efficiency and productivity.

And walk out with more than you had going in.

With Macintosh, you don't just get information. You get consistent capabilities other computers don't have.

Because all Macintosh applications work in a similar way. From word-processing programs to spreadsheet applications to data-base managers.

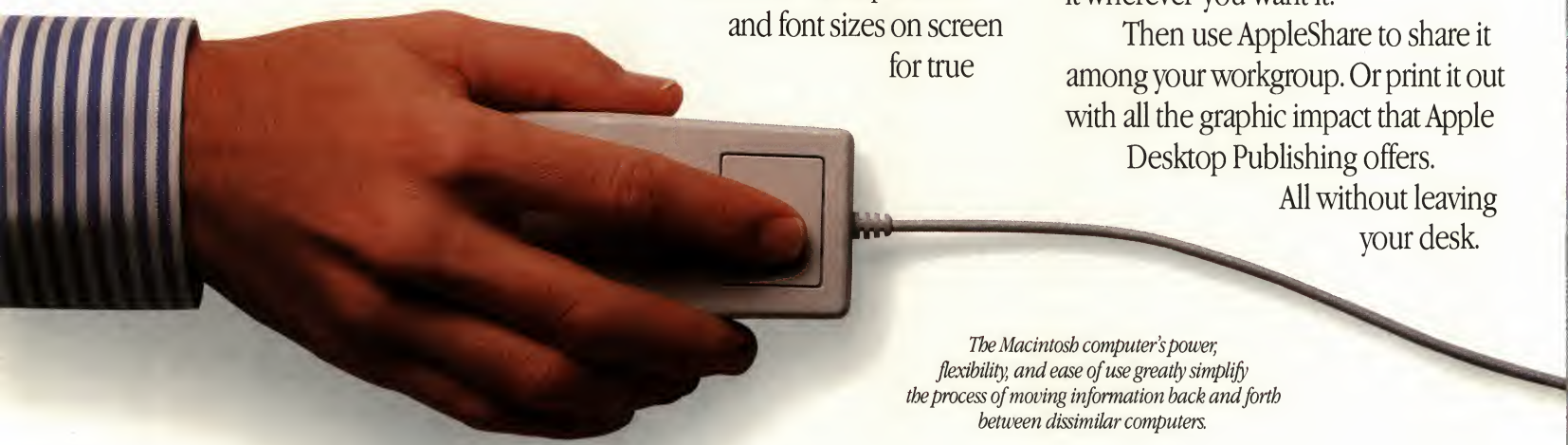
With pull-down menus. Icons. Windows. Multiple fonts and font sizes on screen for true what-you-see-is-what-you-get accuracy. And the ability to cut and paste data between applications.

Which means what you've learned from one program can easily be applied to others.

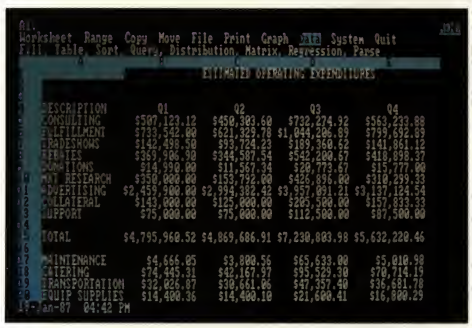
The same is true of Macintosh communications software. Which makes it easier for you to find the data you want. Once you've got the information, you can analyze it as if it were created on the Macintosh. And after you've worked with it, you can put it wherever you want it.

Then use AppleShare to share it among your workgroup. Or print it out with all the graphic impact that Apple Desktop Publishing offers.

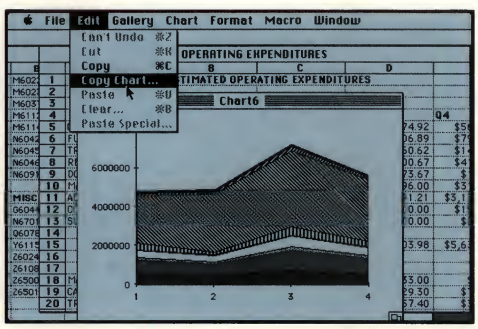
All without leaving your desk.



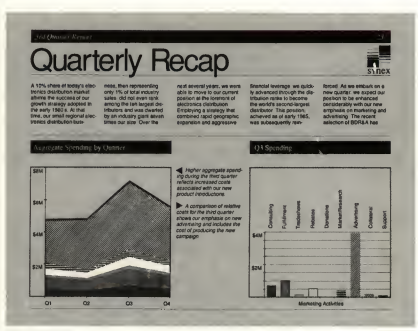
The Macintosh computer's power, flexibility, and ease of use greatly simplify the process of moving information back and forth between dissimilar computers.



Whether your data is stored on an MS-DOS computer, a department-level minicomputer or company mainframe, we can help you do more with it. Using the product MacLink Plus, you can transfer and convert data stored in many common word processing, spreadsheet and data base formats into the Macintosh format.



A Macintosh program like Excel, using the necessary software and hardware, can read a 1-2-3 file directly into its own format to let you further analyze and chart the data. Then, using the cut-and-paste capabilities of the Macintosh, you can move the resulting chart into other Macintosh applications.



After you've had a chance to take a more in-depth look at your data, we can also help you make your point more clearly. Using programs like PageMaker from Aldus Corporation, you can merge charts, pictures, and text from different applications into one document. Which can make for a very strong first impression.

terms.

How to get more from MS-DOS.

With a little extra hardware and software, MS-DOS and Macintosh computers can access the same documents and work together on the same network.

On an MS-DOS computer, simply install an AppleTalk PC Card, plug in AppleTalk connectors, and then load software such as InBox PC to exchange electronic-mail messages with Macintosh computers. You can even transfer documents from MS-DOS systems to Macintosh systems and vice versa.

For example, if you have a spreadsheet created using Lotus 1-2-3, you can retrieve it on a Macintosh as an Excel document. Then use your Macintosh to perform a more comprehensive analysis on it with Excel's advanced statistics and graphing functions. Finally, print it on the LaserWriter.

You can also translate word-processing, spreadsheet, and data-base documents from MS-DOS to Macintosh format and back with products such as the Apple DCA Filter, MacLink Plus, and Microsoft Word 3.0.

On the Macintosh side, if you want to transfer MS-DOS files from a 5.25-inch disk to the Macintosh SE or Macintosh II, simply add an Apple PC 5.25 Drive. And with coprocessor cards available from third-party developers, you can even use your Macintosh to run MS-DOS applications.

IBM
IBM

t terms.

How to get the most from a host.

If your company has a minicomputer or mainframe, your workgroup can now automate routine tasks utilizing host-computer data.

Suppose the project at hand is a sales forecast.

Any Macintosh in the workgroup can automatically log on to the mainframe and work with mainframe data, such as last year's sales figures.

Once the information is in your Macintosh, you have immediate access to applications such as Excel. Then, when you've made your forecasts, the graphics capability of the Macintosh and the superior printing quality of the LaserWriter can help you make your point. And if you want to distribute the results among the workgroup, you can—instantly.

effectively turning the system into a company wide AppleTalk network.

Likewise, the AppleLine™ protocol converter enables each Macintosh in a workgroup to function as an IBM 3278 terminal. You can transfer data to and from the IBM host. Or using a product called Netway 1000A, link an entire AppleTalk workgroup with the IBM SNA environment so efficiently that one Macintosh can carry on up to four simultaneous host sessions.

And chances are, if you have a system other than a DEC VAX or an IBM mainframe, Apple Desktop Communications can exchange data with it, too.

Because with the right software, you can exchange files with Prime, Hewlett-Packard, Data General, and other host systems on the network. Using Omnigate's Allegro Server,

DEC, IBM, Wang. Macintosh can talk to them all.

Any Macintosh in the workgroup can access a DEC VAX minicomputer by emulating, through software, a VT100 terminal—the most popular terminal in the DEC environment—or any DEC graphics terminal. You can even connect an AppleTalk network to the VAX/VMS architecture, and use the VAX as a department-level file server. The VAX can also work with the Helix multiuser data base,

you can bring all the advantages of Macintosh graphics and Apple Desktop Publishing to a Wang word-processing system. And so it goes, with nearly every other host computer you can think of.

All to accommodate the realities of business—today and tomorrow. Even if the realities are other computers in the work situation.

Because with Macintosh computers linked through Apple Desktop Communications, those other computers can provide even greater utility.

Never before have minds

Macintosh is unique. It combines point-and-click simplicity with remarkable graphics capabilities. Its programs all work the same way. So if you understand something as simple as MacWrite™ for word processing, you have the basics for understanding something as powerful as AppleShare for communications.

And now, there are more Macintosh computers than ever. With one call to your authorized Apple representative, you can meet them all.

Macintosh Plus.

For a simple, low-cost way to join the Macintosh family, start with a Macintosh Plus.

Everything you need to begin running Macintosh software comes in one box: high-resolution monitor, mouse, keyboard, 1 megabyte of RAM (expandable to 4 megabytes), internal 3.5-inch 800K floppy-disk drive, and built-in AppleTalk network interface.

What's more, you can expand the Macintosh Plus with peripherals such as external floppy-disk drives, printers, and modems. And through the SCSI port, you can daisy-chain up to seven SCSI peripherals, including high-capacity hard-disk drives (such as the Apple Hard Disk 20SC), tape backup drives, and other devices.

Macintosh SE.

If you'd prefer more flexibility and expandability for not much more money, try the new Macintosh SE.

It's compatible with existing Macintosh software, and can be equipped with two internal disk drives. Both can be 800K floppy-disk drives, or one can be a 20-megabyte hard disk, giving you more storage inside the Macintosh without taking up more space outside it. You can also choose from two different keyboards.

Like the Macintosh Plus, the Macintosh SE comes with 1 megabyte of RAM (expandable to 4 megabytes,)

had so much to meet with.

and can be expanded by adding external disk drives, modems, printers, and SCSI devices. In addition to these features, the Macintosh SE comes with an internal expansion slot that accepts accelerator, communications, and coprocessing cards (to run alternate operating systems).

Macintosh II.

If you want to combine Macintosh technology with even higher performance, look into the Macintosh II.

With its Motorola 68020 CPU, the Macintosh II has twice the processing speed of a Macintosh Plus, as well as twice the data-handling capacity. So no matter what you're working on, you'll see the results of your efforts four times faster.

And you can see these results in high-resolution color with an optional 13-inch color monitor, or in black and white with a high-resolution 12-inch gray-scale monitor.

Macintosh II is also the first Macintosh computer with a user-removable cover. Because it's the first Macintosh with a completely open architecture. Inside, you'll find the CPU board plus six additional slots. So other companies can join us in putting the latest technology to work for you through special-purpose cards for communications, video processing, high-speed computing, and engineering design.

With all this added flexibility, more and more companies are adopting Macintosh as their personal computer for desktop communications. Enabling people to become computer-proficient in hours instead of weeks. Helping workgroups do, not just more work, but better work.

In the most intelligent way possible—together.

Apple Desktop Communications
The Meeting of the Minds™

Apple Computer, Inc., 20525 Mariani Avenue, Cupertino, California 95014

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